



FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 1 and 27

[AU Docket No. 20-429; DA 22-120; FR ID 71309]

Auction of Flexible-Use Licenses in the 2.5 GHz Band for Next-Generation Wireless Services;

Further Comment Sought on Competitive Bidding Procedures for Auction 108

AGENCY: Federal Communications Commission.

ACTION: Proposed rule; proposed auction procedures.

SUMMARY: The Office of Economics and Analytics and the Wireless Telecommunications Bureau seek further comment on the procedures to be used for Auction 108, an auction of approximately 8,300 geographic overlay licenses in the 2.5 GHz band. This document describes the procedures for an ascending clock auction format and seeks comment on whether this format would address concerns and suggestions raised by commenters with respect to both the single-round and simultaneous multiple-round auction formats on which the Federal Communication Commission (Commission or FCC) sought comment in the *Auction 108 Comment Public Notice*.

DATES: Comments are due on or before February 23, 2022.

ADDRESSES: Interested parties may file comments in AU Docket No. 20-429. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. Interested parties are strongly encouraged to file comments electronically.

- *Electronic Filers:* Comments may be filed electronically using the Internet by accessing the ECFS at <https://www.fcc.gov/ecfs/>.
- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing.
- Filings in response to the Public Notice can be sent by commercial courier or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission
- Commercial deliveries (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Dr., Annapolis Junction, MD 20701.

- U.S. Postal Service first-class, Express, or Priority mail must be addressed to 45 L Street, NE, Washington, DC 20554.
- Until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19.
- *Email:* Commenters are asked to also submit a copy of their comments and reply comments electronically to the following address: auction108@fcc.gov.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION: This is a summary of the *Auction 108 Further Comment Public Notice*, AU Docket No. 20-429, DA 22-120, adopted on February 9, 2022 and released on February 9, 2022. The complete text of the *Auction 108 Further Comment Public Notice* is available on the Commission's website at <https://www.fcc.gov/auction/108> or by using the search function for AU Docket No. 20-429, DA 22-120, on the Commission's Electronic Comment Filing System (ECFS) webpage at www.fcc.gov/ecfs. Alternative formats are available to persons with disabilities by sending an email to FCC504@fcc.gov or by calling the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY).

I. INTRODUCTION

1. By the *Auction 108 Further Comment Public Notice*, the Office of Economics and Analytics (OEA), jointly with the Wireless Telecommunications Bureau (WTB), seeks further comment on the auction format to be used for Auction 108. Specifically, the Public Notice seeks comment on whether the use of an ascending clock auction format—a multiple-round auction with bidding for frequency-specific blocks—would address certain concerns and suggestions raised by commenters with

respect to both the single-round and simultaneous multiple-round (SMR) auction formats on which the Commission sought comment in the *Auction 108 Comment Public Notice*, 86 FR 12146, March 3, 2021.

2. On January 13, 2021, the Commission released the *Auction 108 Comment Public Notice* seeking comment on competitive bidding procedures and various other procedures to be used in Auction 108, in accordance with 47 U.S.C. 309(j)(3). In that public notice, the Commission described and sought comment on a single-round auction format with user-defined package bidding, and on an SMR auction format.

3. Numerous commenters responded to the *Auction 108 Comment Public Notice* expressing specific concerns with one or the other format. In particular, several commenters express concern that the potentially long duration of an SMR auction could deter participation. Some commenters assert that the costs of monitoring an overly long auction, as well as complying with an extended quiet period, would be burdensome for bidders, especially smaller entities, and accordingly, they favor the single-round approach. On the other hand, several commenters cite the unfamiliarity of the single-round format as problematic, claiming that the additional resources needed to understand the auction format and develop an optimal bidding strategy could deter participation.

4. The *Auction 108 Further Comment Public Notice* seeks comment on whether the clock auction procedures set forth here would be an appropriate means of addressing these concerns and suggestions. The clock auction procedures described below, like the SMR, would be for a multiple-round auction, a characteristic which is favored by several commenters. A clock auction is a familiar auction format, which has been used in a number of recent FCC spectrum and Universal Service Fund auctions. In addition, comments filed in response to the *Auction 108 Comment Public Notice* suggest the use of intra-round bidding to reduce the length of an SMR auction. Intra-round bidding, however, is not a feature of Commission SMR auctions, but has been regularly used in clock auctions. Commenters also suggest the use of proxy bidding as an option to reduce the costs to bidders of continually monitoring a lengthy multiple-round auction. Proxy bidding has been provided as an option to bidders in reverse clock auctions, but has not been a feature of past SMR auctions.

5. To date, the Commission has used an ascending clock auction format in situations in which multiple frequency blocks of similar spectrum were offered, where a clock auction could be

conducted more efficiently than could an SMR auction with license-by-license bidding. Consistent with these experiences, in the *Auction 108 Comment Public Notice* the Commission discounted the appropriateness of the typical clock auction format it uses—with multiple generic blocks in a category—for this auction of heterogeneous licenses. However, given commenters' requests for a familiar auction format with a manageable duration, with the benefits of intra-round bidding and proxy bidding, the *Auction 108 Further Comment Public Notice* seeks comment on whether the clock auction format is more responsive to bidder needs than the auction formats outlined in the *Auction 108 Comment Public Notice*.

6. As an initial matter, the *Auction 108 Further Comment Public Notice* seeks comment on whether the proposals concerning upfront payments and bidding eligibility as described in the *Auction 108 Comment Public Notice* remain reasonable and appropriate if Auction 108 is conducted under the clock auction format discussed herein. The clock auction procedures discussed in the *Auction 108 Further Comment Public Notice* do not impact the proposals described in the *Auction 108 Comment Public Notice* with respect to implementation of the Commission's part 1 competitive bidding rules. Thus, in calculating its upfront payment amount and hence its initial bidding eligibility for the clock auction format set forth below, an applicant would determine the maximum number of bidding units on which it may wish to bid in any single round, and submit an upfront payment amount covering that total number of bidding units.

7. The *Auction 108 Further Comment Public Notice* seeks focused input on whether the clock auction bidding format discussed herein would address issues raised by commenters with respect to both the SMR and single-round auction formats. It is not intended to invite further comment on other procedures proposed in the *Auction 108 Comment Public Notice* apart from auction design. In light of the limited scope of the *Auction 108 Further Comment Public Notice* and comments urging the Commission to move expeditiously to the start of bidding, OEA and WTB provide for a single round of comments by February 23, 2022, with no filing period for reply comments. A subsequent public notice will announce final procedures for Auction 108, including the procedures, terms, conditions, dates, and deadlines for applying to and participating in Auction 108, as well as provide an overview of the post-auction application and payment processes.

II. FURTHER COMMENT SOUGHT ON BIDDING PROCEDURES

8. The *Auction 108 Further Comment Public Notice* seeks comment on additional multiple-round auction procedures prompted by filings in this proceeding. In particular, OEA and WTB ask for feedback on the use of a clock auction format with bidding on specific licenses. This clock auction format, if adopted, would follow the basic structure of the ascending clock auction used in previous FCC spectrum clock auctions, in which bidding in the clock phase was conducted for multiple generic spectrum blocks in a category in a geographic area, with adjustments, as described below, to account for the fact that Auction 108 would have only a single frequency-specific license in a category in a county. If the clock auction format were adopted for Auction 108, there would be up to three categories of licenses in each county, with one license block in each category. Accordingly, OEA and WTB refer to this specific format as a clock auction with a supply of one in each category—or a clock-1 auction format. Unlike previous FCC spectrum clock auctions, Auction 108 would not include an assignment phase, as none is needed with a format that provides for bidding on specific licenses.

9. OEA and WTB released a technical guide concurrently with the *Auction 108 Further Comment Public Notice* supplementing the information in it and providing the mathematical details and algorithms of the procedures described therein. The Clock-1 Technical Guide details procedures and provide examples for bidding in Auction 108 if a clock auction is adopted.

A. Clock-1 Auction Structure

10. Using the clock-1 format, if adopted, each bidder would be able to bid for licenses, where specific licenses will be identified by a category within a county. As in the SMR auction format, the auction would proceed in a series of rounds, with bidding conducted simultaneously for all licenses available in the auction. Consistent with prior FCC clock auctions, during each bidding round, the bidding system would announce a clock price for each license, and a bidder would indicate its demand for licenses at the clock prices associated with the current round. After the first round, intra-round bids would also be allowed.

11. The clock price for a license would increase from round to round if more than one bidder indicates demand for that license. The bidding rounds would continue until, for all licenses—that is, all

categories in all counties—the number of bidders demanding each license does not exceed one. Once bidding rounds stop, the bidder with demand for a license becomes the winning bidder.

12. The *Auction 108 Further Comment Public Notice* seeks comment on the specific procedures OEA and WTB describe for conducting an auction of 2.5 GHz licenses, as an alternative approach that addresses the concerns of commenters with respect to the single-round and SMR formats described in the *Auction 108 Comment Public Notice*.

1. Single Licenses in Three Bidding Categories

13. Auction 108 will offer geographic overlay licenses for unassigned spectrum in the 2.5 GHz (2496–2690 MHz) band, offered in up to three blocks of spectrum—49.5 megahertz, 50.5 megahertz, and 17.5 megahertz blocks—licensed on a county basis. With overlay licenses, licensees obtain the rights to geographic area licenses overlaid on top of the existing incumbent licenses, *2.5 GHz Report and Order*, 84 FR 57343, October 25, 2019. As with an ordinary flexible-use license, the overlay licensee may operate anywhere within its geographic area, subject to protecting the licensed areas (i.e., circular Geographic Service Areas with a 35-mile radius) of incumbent licensees. If an incumbent licensee in a county cancels or terminates its license, then the overlay licensee obtains the rights to operate in the geographic area and on the channel of the canceled license. An overlay licensee may clear its geographic area by purchasing the incumbent licenses, but it does not have the exclusive right to negotiate with the incumbent licensee for its spectrum rights or to purchase an incumbent license in the geographic area in which it has the overlay rights. For bidding in this clock auction, in the counties where available, OEA and WTB would designate the 49.5 megahertz block as bidding category 1 (C1); the 50.5 megahertz block as bidding category 2 (C2); and the 17.5 megahertz block as bidding category 3 (C3). Specifically, the C1 license block would include channels A1–A3, B1–B3, C1–C3 (49.5 megahertz); the C2 license block would include channels D1–D3, the J channels, and channels A4–G4 (50.5 megahertz); and the C3 license block would include channels G1–G3 and the relevant K channels (16.5 megahertz of contiguous spectrum and 1 megahertz of the K channels associated with the G channel group). Therefore, the combination of a bidding category and a county would define a single specific license, and bidding for a category and a county under the clock-1 auction format would constitute license-by-license bidding, as in the SMR format.

2. Bidding Rounds

14. Under the clock-1 auction format, Auction 108 would consist of multiple, sequential bidding rounds, each followed by the release of round results, as would an SMR auction. Bidding would be conducted simultaneously for all licenses—all categories in all counties available in the auction. In the first bidding round of Auction 108, a bidder would indicate, for each category and county, whether it demands the license at the minimum opening bid price. During each subsequent bidding round, the bidding system would announce a start-of-round price and a clock price for each license, and qualified bidders would indicate the licenses for which they wish to bid at the prices associated with the current round. Bidding rounds would be open for predetermined periods of time. Bidders would be subject to activity and eligibility rules that govern the pace at which they participate in the auction.

15. For each category and county—that is, each license—the clock price for a license would increase from round to round if more than one bidder indicates demand for that license. The bidding rounds would continue until, for every category and county, demand does not exceed one. At that point, the bidder still indicating demand for a license would be deemed the winning bidder.

16. As would be the case with the SMR format, the initial bidding schedule for a clock-1 auction would be announced in a public notice to be released at least one week before the start of bidding, and OEA would retain the discretion to adjust the bidding schedule in order to foster an auction pace that reasonably balances speed with the bidders' needs to study round results and adjust their bidding strategies. Such adjustments may include changes in the amount of time for bidding rounds, the amount of time between rounds, and/or the number of rounds per day, and would depend upon bidding activity and other factors.

17. Regardless of the format ultimately adopted, OEA and WTB would conduct Auction 108 over the Internet. Under the clock-1 format, as with an SMR auction, a bidder would submit its bids using the bidding system's upload function, which allows bid files in a comma-separated values (CSV) text format to be uploaded. The bidding system would allow a bidder to submit bids only for licenses in counties the bidder selected on its FCC Form 175 and for which the bidder has sufficient bidding eligibility.

18. During each round of the bidding, a bidder would be able to modify its bids placed in the current bidding round. It would do so by uploading a new file of all its bids, including the modifications, which would replace bids previously submitted in the round. The system would take the last bid file submission as that bidder's bids for the round.

3. Stopping Rule

19. As in previous FCC clock and SMR auctions, with a clock-1 format for Auction 108, OEA and WTB would use a simultaneous stopping rule, under which all licenses would remain available for bidding until the bidding stops on all licenses. The Commission has discretion to establish stopping rules before or during multiple round auctions in order to complete the auction within a reasonable time, 47 CFR 1.2104(e). Specifically, bidding would close for all licenses after the first round in which demand does not exceed one for any license. Consequently, under this approach, it is not possible to determine in advance how long Auction 108 would last.

4. Availability of Bidding Information

20. The bidding system would disclose, after each round of Auction 108, clock auction round results analogous to those for an SMR auction: namely, for each license, the aggregate demand, the posted price of the last completed round, and the clock price for the next round. The posted price of the previous round is, generally, the start-of-round price if supply exceeds demand; the clock price of the previous round if demand exceeds supply; or the price at which a reduction caused demand to equal supply. Note that, for Auction 108, supply equals one. The identities of bidders making specific bids would not be disclosed until after the close of bidding in the auction.

21. Each bidder would have access to additional information related to its own bidding and bid eligibility. Specifically, after the bids of a round have been processed, the bidding system would inform each bidder of the licenses it currently demands (its processed demand) and its eligibility for the next round.

B. Activity Rule

22. In order to ensure that the auction closes within a reasonable period of time, an activity rule requires bidders to bid actively throughout the auction, rather than wait until late in the auction before participating, an approach that is routinely used in multiple-round auctions such as the SMR and the clock

auction. For a clock-1 auction, a bidder's activity in a round for purposes of the activity rule would be the sum of the bidding units associated with the bidder's demands as applied by the auction system during bid processing (its processed demand). Bidders are required to be active on a specific percentage (the activity requirement percentage) of their current bidding eligibility during each round of the auction. Failure to maintain the requisite activity level would result in a reduction in the bidder's eligibility, possibly curtailing or eliminating the bidder's ability to place bids in subsequent rounds of the auction.

23. Under this auction format, a bidder would be required to maintain a fixed, high level of activity in each round of Auction 108 in order to maintain its bidding eligibility. Specifically, a bidder would be required to be active on between 90% and 100% of its bidding eligibility in all rounds, with the specific percentage within this range to be set for each round. Thus, the activity rule would be satisfied when a bidder has bidding activity on licenses with bidding units that total 90% to 100% of its current eligibility in the round. OEA and WTB would set the activity requirement percentage initially at 95%. If the activity rule is met, then the bidder's eligibility would not change for the next round. If the activity rule is not met in a round, the bidder's eligibility would be reduced accordingly. Bidding activity would be based on the bids that are applied by the FCC auction bidding system. That is, if a bidder bids to reduce its demand for a license, but the FCC auction bidding system cannot apply the request because demand for that license would fall below one, then the bidder's activity would reflect its unreduced demand.

24. OEA would retain the discretion to change the activity requirement percentage during the auction. The bidding system would announce any such changes in advance of the round in which they would take effect, giving bidders adequate notice to adjust their bidding strategies.

25. *Contingent Bidding Limit.* The *Auction 108 Further Comment Public Notice* seeks comment on procedures by which, after Round 1, a bidder may submit bids with bidding units totaling up to a contingent bidding limit greater than or equal to the bidder's current bidding eligibility for the round, as in the three most recent FCC clock auctions. A bidder's contingent bidding limit would be calculated as its current eligibility times a contingent bidding percentage equal to or greater than 100%.

26. Allowing a bidder to submit bids with associated bidding activity greater than its current bidding eligibility would potentially help a bidder avoid having its eligibility reduced as a result of

submitted bids that could not be applied during bid processing. However, even under these additional procedures, the bidder's activity as applied by the auction system during bid processing would not exceed the bidder's current bidding eligibility. That is, if a bidder were allowed to submit bids with associated bidding units exceeding 100% of its current bidding eligibility, its processed activity would never exceed its eligibility.

27. The *Auction 108 Further Comment Public Notice* seeks comment on whether OEA and WTB should allow bidders to submit bids with associated bidding activity greater than their current bidding eligibility. If adopted, OEA and WTB would set the initial contingent bidding percentage at 120%, which would apply starting in Round 2, subject to change in subsequent rounds within a range of 100% to 140%. In any bidding round, the auction bidding system would advise the bidder of its current bidding eligibility, its required bidding activity, and its contingent bidding limit.

C. Acceptable Bids

1. Minimum Opening Bids

28. Minimum opening bids would serve as initial clock prices under a clock-1 auction format. In Round 1 of the auction, qualified bidders would indicate the licenses they demand at the minimum opening bids. OEA and WTB seek comment on whether use of a clock-1 auction format would warrant any change to the minimum opening bids proposed in the *Auction 108 Comment Public Notice*.

2. Clock Price Increments

29. Under clock-1 procedures for Auction 108, after bidding in the first round and before each subsequent round, for each license, the FCC auction bidding system would announce the start-of-round price (also referred to as the posted price) and the clock price for the upcoming round—that is, the lowest price and the highest price at which bidders can indicate their demand for the license during the round. As long as aggregate demand for the license exceeds one, the start-of-round price would be equal to the clock price from the prior round. If demand equaled one at a price in a previous round, then the start-of-round price for the next round would be equal to the price at which demand equaled one. If demand was zero in the previous round, then the start-of-round price for the next round would not increase.

30. The clock price for a license for a round would be set by adding a percentage increment to the start-of-round price. OEA would set the increment percentage within a range of 5% to 30% inclusive, with the initial increment percentage at 10%, and potentially would adjust the increment as rounds continue. OEA would retain the discretion to cap the increment if the total dollar amount of the increment (the difference between the clock price and the start-of-round price) would exceed a certain amount. The 5% to 30% increment range and cap would allow OEA and WTB to set a percentage that manages the auction pace and takes into account bidders' needs to evaluate their bidding strategies while moving the auction along quickly.

3. Intra-Round Bids

31. The use of intra-round bidding has been suggested as a method of reducing the number of bidding rounds needed for the auction to reach equilibrium prices. Intra-round bidding could be particularly useful in the instant context given the number of licenses being offered, such that there would be more benefit than usual in reducing the number of bidding rounds. While the Commission has never conducted an SMR auction with intra-round bidding, it is a familiar feature of the Commission's recent clock auctions. To address commenters' concerns about the length of a multiple-round auction while also being mindful of comments that the use of a familiar auction format would foster participation, the *Auction 108 Further Comment Public Notice* seeks comment on use of intra-round bidding under the clock-1 format. Could intra-round bidding be useful in reducing the number of bidding rounds needed for the auction to reach equilibrium prices?

32. In a clock-1 auction, in a round after the first round, a bidder would be permitted to make intra-round bids by indicating a point between the start-of-round price and the clock price at which its demand for a license changes. In placing an intra-round bid for a license, a bidder would indicate a specific price and the changed quantity it demands (either zero or one) if the price for the license should increase beyond that price.

33. Intra-round bid amounts would be limited to multiples of \$10 for prices below \$10,000; to multiples of \$100 for prices between \$10,000 and \$100,000, inclusive; and to multiples of \$1,000 for prices above \$100,000.

34. Intra-round bids would be optional; a bidder may choose to express its demands only at the start-of-round price or the clock price. Using intra-round bidding would allow the auction system to use relatively large percentage increments, thereby speeding up the auction, without running the risk that a jump in the clock price will overshoot the market clearing price—the point at which only one bidder demands the license—because bidders could specify an amount lower than the clock price.

4. Proxy Bids

35. To address commenters' concerns that monitoring every round of a multiple-round auction may be burdensome, especially for smaller bidders, the *Auction 108 Further Comment Public Notice* seeks comment on providing each bidder with the option to use proxy bidding under the clock-1 format. OEA and WTB would permit a bidder to submit a proxy instruction to the bidding system to reduce its demand for a license to zero at a price higher than the current round's clock price. A bidder would submit its proxy instructions along with its bids, using the bidding system's upload function described in Section II.A.2 (Bidding Rounds), above. Proxy instructions to increase a bidder's demand for a license at a given price would not be permitted.

36. Under these procedures, if a proxy instruction has been submitted, the bidding system would automatically submit a proxy bid to maintain the bidder's demand for the license in every subsequent round as long as the clock price for the round is less than the proxy instruction price. In the first round in which the clock price is greater than or equal to the proxy instruction price, the bidding system would submit a proxy bid on behalf of the bidder to reduce the bidder's demand for that license to zero at the proxy instruction price.

37. In the case that a bid to reduce demand, placed according to proxy instructions or submitted by the bidder in the round, is not applied during bid processing, the bidding system would automatically generate a proxy instruction at the bid price and, in the following rounds, submit proxy bids on behalf of the bidder according to that proxy instruction.

38. In any round, a bidder can remove or modify any existing proxy instructions or proxy bids for the round by uploading a new bid file, including the modifications, which would replace any bids and proxy instructions previously submitted. The system would take the last bid file submission as that bidder's bids and proxy instructions.

39. As is the case for intra-round bid amounts, proxy instruction prices would be limited to multiples of \$10 for prices below \$10,000; to multiples of \$100 for prices between \$10,000 and \$100,000, inclusive; and to multiples of \$1,000 for prices above \$100,000. Proxy instructions would not be publicly released either during or after the auction.

5. Bid Types

40. Under a clock-1 auction format for Auction 108, as in other FCC spectrum clock auctions, a bidder would indicate in each round the licenses it demands at the prices associated with the round. Bidders would be permitted to make two types of bids: simple bids and switch bids.

41. A simple bid indicates a desired quantity (in this auction, one or zero) at a price. A bidder that is willing to maintain its demand for a license at the new clock price would bid for the license at the clock price, indicating that it is willing to pay up to that price, if need be, for the license. A bidder that wishes to change the quantity it demands for a license (relative to its processed demand from the previous round) would express the price (either the clock price or an intra-round price) at which it wishes to change its demand.

42. A switch bid allows the bidder to request to move its demand for a license from C1 to C2, or vice versa, within the same county at a price for the from category (either the clock price or an intra-round price). Switch bids are allowed only in counties with both an available Category 1 and a Category 2 license.

43. Bids to maintain demand would always be applied by the auction bidding system during bid processing. Simple bids to change demand and switch bids would not necessarily be applied during bid processing. See Section II.D (Bid Processing) below for details on bid processing.

6. Missing Bids

44. Under the clock-1 auction format, a bidder would be required to indicate its demands in every round or have a proxy instruction in place (as in other FCC spectrum clock auctions), even if its demands at the new round's prices are unchanged from the previous round. If a bidder does not submit a new bid for a license for which it had processed demand from the previous round and does not have a proxy instruction in place, the system will consider that a missing bid.

45. Missing bids are treated by the auction bidding system as requests to reduce to a quantity of zero for the license. If these requests are applied, then a bidder's bidding activity, and its bidding eligibility for the next round, may be reduced. Unlike in previous FCC clock auctions, under the clock-1 format for Auction 108, a bidder would be permitted to enter proxy instructions. Thus, a bidder that is unable to indicate its demands in every round can avoid having missing bids by entering appropriate proxy instructions.

D. Bid Processing

46. After each bidding round, bid processing procedures would process bids to change demand to determine the processed demand of each bidder for each license and a posted price for each license that would serve as the start-of-round price for the next round. The bid processing procedures described below are similar in many respects to other FCC spectrum clock auctions.

1. No Excess Supply Rule for Bids to Reduce Demand

47. Under the clock-1 auction format, the FCC auction bidding system would not allow a bidder to reduce its demand for a license if the reduction would cause demand to fall below one. Therefore, if a bidder has been bidding for a specific license but submits a simple bid to reduce its demand to zero for the license if the price should increase above the price in its bid, the FCC auction bidding system would treat the bid as a request to reduce demand that would be applied only if the no excess supply rule would be satisfied. Similarly, if a bidder submits a switch bid to move its demand from the C1 license to the C2 license in the same county, the FCC auction bidding system would treat the bid as a request that would be applied only if the no excess supply rule would be satisfied for C1 in the county, and vice versa. Note, however, if a bid to reduce demand is not applied, the bidder will not be asked to pay more for the license than the highest price it agreed to pay.

2. Eligibility Rule for Bids to Increase Demand

48. The bidding system would not allow a bidder to increase its demands for licenses if the total number of bidding units associated with the bidder's demands exceeds the bidder's bidding eligibility for the round. Therefore, if a bidder submits a simple bid to add a license for which it did not have processed demand in the previous round, the FCC auction bidding system would treat the bid as a request to increase demand that would be applied only if that would not cause the bidder's activity to

exceed its eligibility. Note, the eligibility rule for bids to increase demand is always satisfied for switch bids because the bidder's processed activity does not change when a switch bid is applied (since, in a given county, the C1 and C2 licenses have the same number of bidding units).

3. Processed Demand

49. After a round ends, the bidding system would first consider and apply all bids to maintain demand, and then it would process bids to change demand in order of price point, where the price point represents the percentage of the bidding interval for the round. The bidding system would process bids to change demand in ascending order of price point, first considering intra-round bids in order of price point and then bids at the clock price. The system would consider bids at the lowest price point across all licenses, then look at bids at the next price point across all licenses, and so on. If there are multiple bids at a single price point, the system would process bids in order of a bid-specific pseudo-random number. As it considers each submitted bid during bid processing, the FCC auction bidding system would determine whether there is excess demand for a license at that point in the processing in order to determine whether a bidder's request to reduce demand for that license can be applied. Likewise, the auction bidding system would evaluate the activity associated with the bidder's most recently determined demands at that point in the processing to determine whether a request to increase demand can be applied.

50. Because in any given round some bidders may request to increase demands for licenses while others may request reductions, the price point at which a bid is considered by the auction bidding system can affect whether it is applied. In addition, bids that were not applied because demand would fall below one or because the bidder's activity (as applied by the auction system) would exceed its eligibility would be held in a queue and considered, again in price point order, if there should be excess demand or if the bidder's activity (as applied by the auction system) is reduced sufficiently later in the processing after other bids are processed.

51. Therefore, once a round closes, the auction system would process bids to change demand by first considering the bid submitted at the lowest price point and determining whether that bid can be applied given bidders' demands as determined at that point in the bid processing. If the bid can be applied, the licenses that the bidder holds at that point in the processing would be adjusted, and aggregate demand for the license would be recalculated accordingly. If the bid cannot be applied, the unfulfilled bid

would be held in a queue to be considered later during bid processing for that round. The FCC auction bidding system would then consider the bid submitted at the next lowest price point, applying it or not given the most recently determined demands of bidders. Any unfulfilled requests would again be held in the queue, and aggregate demand would again be recalculated. Every time a bid is applied, the unfulfilled bids held in the queue would be reconsidered, in the order of the original price points of the bids (and by pseudo-random number, in the case of tied price points). The auction bidding system would not carry over unfulfilled bid requests to the next round. The bidding system, however, would generate a proxy bid in the case of bids to reduce to zero that are not applied. The bidding system would advise bidders of the status of their bids when round results are released.

4. Price Determination

52. The FCC auction bidding system further would determine, based on aggregate demand, the posted price for each license for the round that would serve as the start-of-round price for the next round. The price for a license would increase from round to round as long as there is excess demand for the license but would not increase if only a single bidder demands the license.

53. If, at the end of a round, the aggregate demand for a license exceeds the supply of one, the posted price would equal the clock price for the round. If a reduction in demand was applied during the round and caused demand to fall to one, the posted price would be the price at which the reduction was applied. If aggregate demand is zero, or one and no bid to reduce demand was applied for the license, then the posted price would equal the start-of-round price for the round. The range of acceptable bid amounts for the next round would be set by adding the percentage increment to the posted price.

54. Under these procedures for a clock-1 auction, if a bid to reduce demand is not applied, it is because there is not excess demand for the license and, therefore, the posted price would not increase. Hence, a bidder that makes a bid to reduce demand that cannot be applied would not face a price for the license that is higher than its bid price.

55. After the bids of the round have been processed, if the stopping rule has not been met, the FCC auction bidding system would announce clock prices to indicate a range of acceptable bids for the next round. Each bidder would be informed of the licenses for which it has processed demand and the extent of excess demand for the licenses.

E. Winning Bids

56. Under a clock-1 auction format for Auction 108, a bidder with processed demand for a license at the time the stopping rule is met would become the winning bidder for the license. The final price for a license would be the posted price for the final round.

F. Digital Equity and Inclusion

57. Finally, as part of the Commission's continuing effort to advance digital equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality, OEA and WTB invite comment on any equity-related considerations and benefits (if any) that may be associated with the issues discussed herein. Specifically, OEA and WTB seek comment on how any bidding procedures for Auction 108 may promote or inhibit advances in diversity, equity, inclusion, and accessibility.

III. PROCEDURAL MATTERS

A. Second Supplemental Initial Regulatory Flexibility Analysis

58. OEA and WTB have prepared a Second Supplemental Initial Regulatory Flexibility Analysis (Second Supplemental IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in the *Auction 108 Further Comment Public Notice* to supplement the Regulatory Flexibility Analyses completed in the *2.5 GHz Report and Order*, *Auction 108 Comment Public Notice*, and other Commission orders pursuant to which Auction 108 will be conducted. Written public comments are requested on the Second Supplemental IRFA. Comments must be identified as responses to the Second Supplemental IRFA and must be filed by the same deadline for comments specified in the **DATES** section of this document. OEA and WTB will send a copy of the *Auction 108 Further Comment Public Notice*, including the Second Supplemental IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the *Auction 108 Further Comment Public Notice* and the Second Supplemental IRFA (or summaries thereof) will be published in the *Federal Register*.

59. *Need for, and Objectives of, the Proposed Rules.* The *Auction 108 Further Comment Public Notice* seeks further comment on procedural rules to govern Auction 108, which will auction geographic overlay licenses of unlicensed spectrum in the 2.5 GHz band (2496–2690 MHz). The process

is intended to provide notice of and adequate time for potential applicants to comment on these additional auction procedures. To promote the efficient and fair administration of the competitive bidding process for all Auction 108 participants, the *Auction 108 Further Comment Public Notice* seeks further comment on the use of a clock auction format, including the following modified bidding procedures that would address concerns and suggestions raised by commenters, including small entities, in response to the *Auction 108 Comment Public Notice*:

- use of a clock auction format with a supply of one for Auction 108, under which each qualified bidder would indicate in successive clock bidding rounds its demand for the single license in each category in each specific geographic area;
- establishment of categories based on the framework set forth in the *2.5 GHz Report and Order*, in which up to three blocks of spectrum—49.5 megahertz, 50.5 megahertz, and 17.5 megahertz blocks—would be offered in each available county;
- retention by OEA of discretion to adjust the bidding schedule in order to manage the pace of Auction 108;
- use of a simultaneous stopping rule for Auction 108, under which all licenses would remain available for bidding until the bidding stops on all licenses;
- use of information procedures which would make public after each round of Auction 108, for each category in each county, the aggregate demand, the posted price of the last completed round, and the clock price for the next round;
- use of an activity rule that would require bidders to be active on between 90% and 100% of their bidding eligibility in all regular clock rounds, with the initial activity requirement percentage set at 95% and with OEA retaining discretion to change the activity requirement percentage during the auction;
- use of a contingent bidding limit that would allow a bidder to submit bids with associated bidding activity greater than its current bidding eligibility;
- establishment of an initial contingent bidding percentage at 120%, which would be subject to change in subsequent rounds within a range of 100% to 140%;
- a specific minimum opening bid amount for licenses available in Auction 108;

- establishment of acceptable bid amounts, including clock price increments and intra-round bids, along with a methodology for calculating such amounts;
- to permit a bidder to submit a proxy instruction to reduce its demand for a license to zero at a price higher than the current round's clock price;
- to permit bidders to make two types of bids, simple bids and switch bids, in which a simple bid indicates a desired quantity of blocks (one or zero) for a license at a price (either the clock price or an intra-round price), and a switch bid allows the bidder to request to move its demand from C1 to C2, or vice versa, within the same county at a price for the from category (either the clock price or an intra-round price);
- a requirement that bidders indicate their demands in every round or submit appropriate proxy instructions, even if their demands at the new round's prices are unchanged from the previous round, and the treatment of bids that are not reconfirmed as requests to reduce demand to a quantity of zero for the license; and
- a methodology for processing bids and requests to reduce and increase demand.

60. The procedures for the conduct of Auction 108 on which the *Auction 108 Further Comment Public Notice* seeks further comment constitute the more specific implementation of the competitive bidding rules contemplated by 47 CFR parts 1 and 27, the *2.5 GHz Report and Order*, and relevant competitive bidding orders, and are fully consistent therewith.

61. *Legal Basis.* The Commission's statutory obligations to small businesses under the Communications Act of 1934, as amended, are found in 47 U.S.C. 309(j)(3)(B) and 309(j)(4)(D). The statutory basis for the Commission's competitive bidding rules is found in various provisions of the Communications Act of 1934, as amended, including 47 U.S.C. 154(i), 301, 302, 303(e), 303(f), 303(r), 304, 307, and 309(j). The Commission has established a framework of competitive bidding rules, updated most recently in 2015, pursuant to which it has conducted auctions since the inception of the auctions program in 1994 and would conduct Auction 108.

62. *Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply.* The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted. The RFA

generally defines the term small entity as having the same meaning as the terms small business, small organization, and small governmental jurisdiction. In addition, the term small business has the same meaning as the term small business concern under the Small Business Act. A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

63. As noted above, Regulatory Flexibility Analyses were incorporated into the *2.5 GHz Report and Order* and the *Auction 108 Comment Public Notice*. In those analyses, the Commission described in detail the small entities that might be significantly affected. In the *Auction 108 Further Comment Public Notice*, OEA and WTB incorporate by reference the descriptions and estimates of the number of small entities from the previous Regulatory Flexibility Analyses in the *2.5 GHz Report and Order* and the *Auction 108 Comment Public Notice*.

64. *Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities.* OEA and WTB do not expect the processes and procedures described in the *Auction 108 Further Comment Public Notice* will require small entities to hire attorneys, engineers, consultants, or other professionals to participate in Auction 108 and comply with the procedures ultimately established because of the information, resources, and guidance the Commission makes available to potential and actual participants. For example, OEA intends to make information on the bidding system available and offer demonstrations and other educational opportunities for applicants in Auction 108 to familiarize themselves with the FCC auction application system and the auction bidding system, consistent with the additional bidding procedures described in the *Auction 108 Further Comment Public Notice*. By providing these resources as well as the resources discussed below, OEA and WTB expect small entities that use the available resources to experience lower participation and compliance costs. Nevertheless, while OEA and WTB cannot quantify the cost of compliance with the procedures on which they seek further comment, they do not believe that the costs of compliance will unduly burden small entities that choose to participate in the auction because the additional procedures for Auction 108 on which the *Auction 108 Further Comment Public Notice* seeks further comment are similar in many respects to the procedures in recent spectrum auctions conducted by the Commission.

65. *Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered.* The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.

66. OEA and WTB have taken steps to minimize any economic impact of the additional procedures on small entities through, among other things, the Commission's potential use of a clock auction format. Among the comments received in response to the *Auction 108 Comment Public Notice* were several that support the SMR format at least in part because it is familiar to bidders, suggesting that small entities may be deterred from participating under the single-round format with package bidding described in the *Auction 108 Comment Public Notice*. The potential length of an SMR auction, however, is seen by some commenters as a disadvantage. With those comments in mind, the clock auction format on which the *Auction 108 Further Comment Public Notice* seeks comment would be a familiar format to small entities that have previously participated in Commission auctions, and would consist of multiple rounds of bidding and incorporate intra-round bidding to potentially help manage the duration of the auction, thereby lessening the burden of a multiple-round auction on small entities. In addition, bidders would have an option to choose to use proxy bid instructions to reduce the time they spend monitoring the auction, further benefitting small entities.

67. OEA and WTB have also taken steps to minimize any economic impact of the Commission's auction procedures on small entities through, among other things, the many resources that the Commission provides to potential auction participants. These resources, which are described in detail in the Supplemental IRFA incorporated into the *Auction 108 Comment Public Notice* are provided at no cost and include, for example, access to an FCC Auctions Hotline for information about the auction process and procedures; an FCC Auctions Technical Support Hotline for technical assistance on issues such as access to or navigation within the electronic FCC Form 175 and use of the FCC's auction bidding

system; a web-based, interactive online tutorial produced by Commission staff to familiarize applicants with auction procedures, filing requirements, bidding procedures, and other matters related to an auction; the opportunity to participate in a mock auction; and the opportunity to participate in Auction 108 electronically via the Internet. Additionally, eligible small businesses and rural service providers will be able to participate in the bidding credit program for Auction 108, which may lower their relative costs of participation. In the *Auction 108 Further Comment Public Notice*, OEA and WTB incorporate by reference the description of the additional steps taken to minimize the significant economic impact on small entities, and significant alternatives considered, from the Regulatory Flexibility Analysis in the *Auction 108 Comment Public Notice*.

68. The procedures for the conduct of Auction 108 on which the *Auction 108 Further Comment Public Notice* seeks further comment constitute the more specific implementation of the competitive bidding rules contemplated by 47 CFR parts 1 and 27, the *2.5 GHz Report and Order*, and relevant competitive bidding orders, and are fully consistent therewith.

69. *Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules.* None.

B. Deadlines and Filing Procedures

70. Pursuant to 47 CFR 1.415(d) and 1.419, interested parties may file comments on or before the date indicated in the **DATES** section of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies.

71. *Ex Parte Requirements.* This proceeding has been designated as a permit-but-disclose proceeding in accordance with the Commission's ex parte rules. Persons making oral ex parte presentations must file a copy of any written presentations or memoranda summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine Period applies). Persons making oral ex parte presentations are reminded that memoranda summarizing the presentations must (1) list all persons attending or otherwise participating in the meeting at which the ex parte presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments,

memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to the Commission staff during ex parte meetings are deemed to be written ex parte presentations and must be filed consistent with 47 CFR 1.1206(b). In proceedings governed by 47 CFR 1.49(f) or for which the Commission has made available a method of electronic filing, written ex parte presentations and memoranda summarizing oral ex parte presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's ex parte rules.

Federal Communications Commission.

William Huber,

Associate Chief, Auctions Division, Office of Economics and Analytics.

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